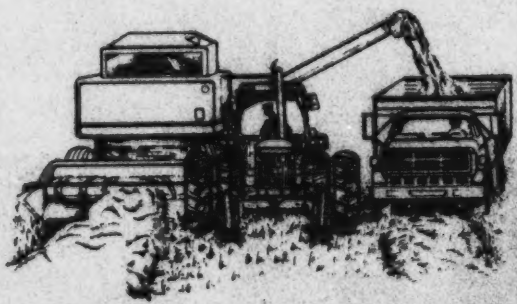
Saskatchewan Agriculture

Economics Branch

Farm Management



FARM MACHINERY
CUSTOM & RENTAL
RATE GUIDE 1986

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Introduction

This publication gives detailed information regarding guidelines for machine ownership, operating costs, custom rates and rental rates for farm machinery. This information is provided as a guideline and should be interpreted and adjusted for individual situations.

The costs calculated in this booklet use the list price less a discount to arrive at an average selling price of a machine. Machine companies may reduce the actual selling price of the machinery below these suggested retail prices. In other words the retail price may have increased however dealer discounts may be higher compared to previous years.

The intent of this booklet is to estimate both the ownership (fixed) and operating (variable) costs of owning machinery.

The farmer who has already invested in a machine for his own use may be in a position to do custom work for a neighbour for the suggested custom rate less the investment cost and still realize a return.

At the other end of the scale there may be individuals who have a custom farming business. In this instance all costs that are calculated must be included plus overhead costs (transportation, liability insurance, utility costs, advertising, shop equipment). Custom operators should determine these overhead costs before establishing their rates.

The first part of this publication gives a summary of suggested custom rates of specific items. In the remaining part of this book are the detailed calculations that were used to arrive at the total costs that are involved when renting or custom operating farm equipment. To illustrate the total costs three separate tables are used.

1. Machinery Costs Information
2. Rental Rate Calculations
3. Custom Work Rates

Machinery Cost Table

The basis for the machine cost data is new cost of the equipment. This information was collected in February 1986, using the most current equipment pricing guides of the major equipment manufacturers and various shortline manufacturers. The manufacturers suggested retail price was discounted 15-25%.

The machine cost data is given for a wide variety of farm equipment, under three ranges of annual hours of use. The data is specific to each individual machine and details fixed costs (depreciation, investment cost, insurance and housing) and variable costs (repairs, fuel, oil and grease). The total cost per hour figure is the total cost of owning and operating that particular machine. In the case of drawn equipment, a power unit suitable to that drawn machine has been selected and the total cost of both the power unit and the drawn machine have been added together to arrive at an overall total cost for that operation.

Rental Rates Table

The rental rates section deals specifically with renting equipment on short time periods. The rates are not designed as lease rates, (i.e.) the rates would not be current for long term or seasonal lease arrangements.

Rental rates are calculated by adding the fixed costs (ownership costs) and repairs to arrive at the basic rental costs. The margin is calculated by multiplying the basic rental costs times 15%. The margin is added to cover risk, profit and management. The rental rates include an allowance for repair only. The renter is responsible for fuel and lubrication. No account is made to cover neglect by the renter. In the case of neglect, a settlement between the parties involved must be negotiated.

The suggested rental rate is the addition of the basic rental costs and the margin. The rental rates are specific for each machine and if a complement (tractor and machine) is rented, the addition of the two machine rental rates should be used in establishing the rental rates of the complement.

Custom Rates Table

The custom rates section deals specifically with suggested rates for custom work (machine(s) and operator). The basic custom work costs are calculated by summing the total costs of the power unit (if applicable), machine and the labor allowance per hour. A margin to cover risk, profit, management and an incentive for the operator is calculated by multiplying the basic custom costs times 15%. The custom rate is then determined by adding the basic labor rate of $9.00 per/hour.

The information provided in all three segments of the table are based on average conditions and should be used as guides only.

Appendix B and C contain the calculation worksheets which can be used along with Appendix D in establishing a rental or custom rate for your particular machine. When estimating your own costs refer to the instructions on the worksheet for the methods used to do the actual calculations.

Additional points to consider when negotiating a custom work agreement are outlined in Appendix E, along with a sample of a custom farming agreement.

This publication has been compiled by Lyle Stavness, Tom Switzer, and John Jacques of the farm management section. The contributions of the many people that assisted with the compiling and reviewing of this material are acknowledged.

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Summary of the 1986 Suggested Custom Rate Guide

The list below is a summary of standard custom farming operations and their suggested custom rates. These are suggested rates only and will vary with adjustment according to individual situations. Detailed steps of how these suggested rates were arrived can be found in the proceeding part of the publication.

Power Units	
Tractors 2WD	30¢ - 50¢/PTO HP/HR
Tractors 4WD	36¢ - 44¢/DRBR HP/HR
Tillage	**1986 Suggested Rate/Acre**
Heavy Duty Cultivator	$3.75
Field Cultivator	3.25
Rodweeder w/o multiplex	2.75
Rodweeder w multiplex	3.00
Tandem Disc	6.00
Plows	13.50
Seeding	
Air Seeder	$7.50
Discer if Packers Behind Add .40¢/Acre	4.75
Harrow	2.00
Harrow and Packer	3.50
Hoe Drills	7.25
Press Drills	7.25
No Till Drill	19.50
Spraying	
Sprayer only	$1.50
Truck and Water Tank	.50
Harvest	
Swathing	$3.75
Combining (Trucking not included)	12.50
Forage	
Standard Bales	0.30/bale
Round Bales 750 lbs	3.50/bale
1500 lbs	6.75/bale
3000 lbs	11.50/bale

Bale Stacking	$0.40/bale
Stacking Loose Hay	10.00/ton
Hay Rake	6.00
Mower	7.50
Mower Conditioner	9.50

Miscellaneous

Bulk Fertilizer Applicators	$2.50/acre
Pneumatic Grain Movers	0.05/bu.
Rock Picker	45.00/hr.
Front End Loader	38.00/hr.

POWERED EQUIPMENT MACHINE/ SIZE	ORIG. COST	ANN. HRS. USE	FUEL TYPE + GALS /HR	MACHINE COMPONENT COSTS PER HOUR: FIXED COSTS ($/HR)	REPAIR COSTS ($/HR)	FUEL COSTS ($/HR)	LUBE + OIL COSTS ($/HR)	TOTAL COSTS PER HOUR (NO LABOR) ($/HR)	LABOR COSTS $/HR)	MACHINE RENTAL PER HOUR: BASIC RENTAL COSTS ($/HR)	MARGIN ($/HR)	RENTAL RATE ($/HR)	CUSTOM WORK RATES: BASIC CUSTOM WORK RATES ($/HR)	MARGIN ($/HR)	CUSTOM RATE ($/HR)	WORK RATE	SUGG. CUSTOM RATE PER ACRE
TRACTORS 2WD(PTO-HP)																	
30-39 HP	13,400	400	1.7	4.44	1.12	2.62	.12	8.30									
		600	(D)	3.12	1.12	2.62	.12	6.98	9.00	4.24	.64	4.88	15.98	2.40	18.38		
		800		2.49	1.12	2.62	.12	6.35									
40-49 HP	17,100	400	1.9	5.67	1.42	2.93	.16	10.18									
		600	(D)	3.98	1.42	2.93	.16	8.49	9.00	5.40	.81	6.21	17.49	2.62	20.11		
		800		3.18	1.42	2.93	.16	7.69									
50-59 HP	19,300	400	2.3	6.40	1.61	3.54	.19	11.74									
		600	(D)	4.49	1.61	3.54	.19	9.83	9.00	6.10	.92	7.02	18.83	2.82	21.65		
		800		3.59	1.61	3.54	.19	8.93									
60-69 HP	22,600	400	3.0	7.49	1.88	4.62	.23	14.22									
		600	(D)	5.26	1.88	4.62	.23	11.99	9.00	7.14	1.07	8.21	20.99	3.15	24.14		
		800		4.20	1.88	4.62	.23	10.93									
70-79 HP	25,600	400	3.6	8.48	2.13	5.54	.26	16.41									
		600	(D)	5.96	2.13	5.54	.26	13.89	9.00	8.09	1.21	9.30	22.89	3.43	26.32		
		800		4.76	2.13	5.54	.26	12.69									
80-89 HP	37,200	400	3.9	12.33	3.10	6.01	.30	21.74									
		600	(D)	8.66	3.10	6.01	.30	18.07	9.00	11.76	1.76	13.52	27.07	4.06	31.13		
		800		6.92	3.10	6.01	.30	16.33									
90-99 HP	44,200	400	4.5	14.65	3.68	6.93	.33	25.59									
		600	(D)	10.29	3.68	6.93	.33	21.23	9.00	13.97	2.10	16.07	30.23	4.53	34.76		
		800		8.22	3.68	6.93	.33	19.16									
100-119 HP	49,100	400	5.0	16.27	4.09	7.70	.39	28.45									
		600	(D)	11.44	4.09	7.70	.39	23.62	9.00	15.53	2.33	17.86	32.62	4.89	37.51		
		800		9.13	4.09	7.70	.39	21.31									
120-139 HP	54,200	400	6.2	17.96	4.51	9.55	.46	32.48									
		600	(D)	12.62	4.51	9.55	.46	27.14	9.00	17.13	2.57	19.70	36.14	5.42	41.56		
		800		10.08	4.51	9.55	.46	24.60									
140-159 HP	59,700	400	7.1	19.78	4.97	10.93	.53	36.21									
		600	(D)	13.90	4.97	10.93	.53	30.33	9.00	18.87	2.83	21.70	39.33	5.90	45.23		
		800		11.10	4.97	10.93	.53	27.53									
160-179 HP	64,700	400	8.5	21.44	5.39	13.09	.60	40.52									
		600	(D)	15.07	5.39	13.09	.60	34.15	9.00	20.46	3.07	23.53	43.15	6.47	49.62		
		800		12.03	5.39	13.09	.60	31.11									
180 + HP	70,200	400	8.6	23.26	5.85	13.24	.63	42.98									
		600	(D)	16.35	5.85	13.24	.63	36.07	9.00	22.20	3.33	25.53	45.07	6.76	51.83		
		800		13.06	5.85	13.24	.63	32.78									

POWERED EQUIPMENT MACHINE/ SIZE	ORIG. COST	ANN. HRS. USE	FUEL TYPE + GALS /HR	MACHINE COMPONENT COSTS PER HOUR: FIXED COSTS ($/HR)	REPAIR COSTS ($/HR)	FUEL COSTS ($/HR)	LUBE + OIL COSTS ($/HR)	TOTAL COSTS PER HOUR (NO LABOR) ($/HR)	LABOR COSTS $/HR)	MACHINE RENTAL PER HOUR: BASIC RENTAL COSTS ($/HR)	MARGIN ($/HR)	RENTAL RATE ($/HR)	CUSTOM WORK RATES: BASIC CUSTOM WORK RATES ($/HR)	MARGIN ($/HR)	CUSTOM RATE ($/HR)	WORK RATE	SUGG. CUSTOM RATE PER ACRE
TRACTORS 4WD(DBR.HP)																	
100-149 HP	64,900	300	7.6	28.23	4.33	11.70	.44	44.70									
		400	(D)	21.87	4.33	11.70	.44	38.34	9.00	26.20	3.93	30.13	47.34	7.10	54.44		
		500		18.14	4.33	11.70	.44	34.61									
150-174 HP	78,800	300	9.1	34.28	5.26	14.01	.57	54.12									
		400	(D)	26.56	5.26	14.01	.57	46.40	9.00	31.82	4.77	36.59	55.40	8.31	63.71		
		500		22.02	5.26	14.01	.57	41.86									
175-199 HP	89,900	300	10.1	39.11	6.00	15.55	.66	61.32									
		400	(D)	30.30	6.00	15.55	.66	52.51	9.00	36.30	5.45	41.75	61.51	9.23	70.74		
		500		25.13	6.00	15.55	.66	47.34									
200-224 HP	99,000	300	11.9	43.07	6.60	18.33	.75	68.75									
		400	(D)	33.36	6.60	18.33	.75	59.04	9.00	39.96	5.99	45.95	68.04	10.21	78.25		
		500		27.67	6.60	18.33	.75	53.35									
225-300 HP	112,700	300	14.0	49.02	7.52	21.56	.92	79.02									
		400	(D)	37.98	7.52	21.56	.92	67.98	9.00	45.50	6.83	52.33	76.98	11.55	88.53		
		500		31.50	7.52	21.56	.92	61.50									
301 + HP	139,300	300	18.0	60.60	9.29	27.72	1.05	98.66									
		400	(D)	46.94	9.29	27.72	1.05	85.00	9.00	56.23	8.43	64.66	94.00	14.10	108.10		
		500		38.93	9.29	27.72	1.05	76.99									
TRUCKS PICK-UP																	
1/2 TON	11,400	100	3.0	14.45	3.33	5.16	.35	23.29									
(70 KPH)		120	(G)	12.40	3.33	5.16	.35	21.24	9.00	15.73	2.36	18.09	30.24	4.54	34.78		
		140		10.98	3.33	5.16	.35	19.82									
3/4 TON	13,800	100	3.5	17.49	4.03	6.02	.35	27.89									
(70 KPH)		120	(G)	15.01	4.03	6.02	.35	25.41	9.00	19.04	2.86	21.90	34.41	5.16	39.57		
		140		13.29	4.03	6.02	.35	23.69									
TRUCKS GRAIN																	
1 TON	14,100	100	3.9	17.87	5.29	6.71	.42	30.29									
(70 KPH)		120	(G)	15.33	5.29	6.71	.42	27.75	9.00	20.62	3.09	23.71	36.75	5.51	42.26		
		140		13.58	5.29	6.71	.42	26.00									
3-4 TON	28,800	100	5.0	36.50	10.80	8.60	.42	56.32									
(60 KPH)		120	(G)	31.32	10.80	8.60	.42	51.14	9.00	42.12	6.32	48.44	60.14	9.02	69.16		
		140		27.73	10.80	8.60	.42	47.55									
4 TON	37,800	100	7.0	47.91	14.18	12.04	.49	74.62									
(60 KPH)		120	(G)	41.11	14.18	12.04	.49	67.82	9.00	55.29	8.29	63.58	76.82	11.52	88.34		
GAS TANDEM		140		36.39	14.18	12.04	.49	63.10									
4 TON	44,200	100	4.1	56.02	16.58	6.31	.49	79.40									
(60 KPH)		120	(D)	48.07	16.58	6.31	.49	71.45	9.00	64.65	9.70	74.35	80.45	12.07	92.52		
DSL. TANDEM		140		42.56	16.58	6.31	.49	65.94									

DRAWN EQUIPMENT MACHINE/ SIZE	ORIG. COST	ANN. HRS. USE	MACHINE COMPONENT COSTS PER HOUR: FIXED COSTS ($/HR)	REPAIR COSTS ($/HR)	TOTAL COSTS ($/HR)	MACHINE RENTAL PER HOUR: BASIC RENTAL COSTS ($/HR)	MARGIN ($/HR)	RENTAL RATE ($/HR)	MACHINE TOTAL COSTS ($/HR)	POWER UNIT TOTAL COSTS ($/HR)	LABOR ($/HR)	CUSTOM WORK RATES: BASIC CUSTOM WORK RATES ($/HR)	MARGIN ($/HR)	CUSTOM RATE ($/HR)	WORK RATE	SUGG. CUSTOM RATE PER ACRE
CULTIVATORS HEAVY DUTY																
18-20 FT	8,700	150	7.07	1.91	8.98											
		250	4.54	1.91	6.45	6.45	.97	7.42	6.45	18.07 85 HP	9.00	33.52	5.03	38.55	9.50 AC/HR	
		350	3.47	1.91	5.38											
21-22 FT	9,600	150	7.80	2.11	9.91											
		250	5.01	2.11	7.12	7.12	1.07	8.19	7.12	23.62 110 HP	9.00	39.74	5.96	45.70	11.00 AC/HR	
		350	3.83	2.11	5.94											
23-25 FT	11,450	150	9.31	2.52	11.83											
		250	5.98	2.52	8.50	8.50	1.28	9.78	8.50	23.62 110 HP	9.00	41.12	6.17	47.29	12.00 AC/HR	
		350	4.57	2.52	7.09											
27-29 FT	12,500	150	10.16	2.75	12.91											
		250	6.53	2.75	9.28	9.28	1.39	10.67	9.28	27.14 130 HP	9.00	45.42	6.81	52.23	14.00 AC/HR	
		350	4.99	2.75	7.74											
31 FT	14,100	150	11.46	3.10	14.56											
		250	7.36	3.10	10.46	10.46	1.57	12.03	10.46	30.33 150 HP	9.00	49.79	7.47	57.26	15.50 AC/HR	
		350	5.63	3.10	8.73											
33 FT	15,200	150	12.36	3.34	15.70											
		250	7.93	3.34	11.27	11.27	1.69	12.96	11.27	30.33 150 HP	9.00	50.60	7.59	58.19	16.50 AC/HR	
		350	6.07	3.34	9.41											
35 FT	15,500	150	12.60	3.41	16.01											
		250	8.09	3.41	11.50	11.50	1.73	13.23	11.50	34.15 170 HP	9.00	54.65	8.20	62.85	17.50 AC/HR	
		350	6.19	3.41	9.60											
37 FT	17,000	150	13.82	3.74	17.56											
		250	8.87	3.74	12.61	12.61	1.89	14.50	12.61	34.15 170 HP	9.00	55.76	8.36	64.12	18.50 AC/HR	
		350	6.79	3.74	10.53											
39 FT	17,750	150	14.43	3.91	18.34											
		250	9.27	3.91	13.18	13.18	1.98	15.16	13.18	34.15 170 HP	9.00	56.33	8.45	64.78	19.50 AC/HR	
		350	7.09	3.91	11.00											
41-45 FT	17,850	150	14.51	3.93	18.44											
		250	9.32	3.93	13.25	13.25	1.99	15.24	13.25	36.07 180 HP	9.00	58.32	8.75	67.07	21.50 AC/HR	
		350	7.13	3.93	11.06											
50 FT	27,900	150	22.68	6.14	28.82											
		250	14.56	6.14	20.70	20.70	3.11	23.81	20.70	59.04 HP	9.00	88.74	13.31	102.05	25.00 AC/HR	
		350	11.14	6.14	17.28											

DRAWN EQUIPMENT MACHINE/ SIZE	ORIG. COST	ANN. HRS. USE	MACHINE COMPONENT COSTS PER HOUR: FIXED COSTS ($/HR)	REPAIR COSTS ($/HR)	TOTAL COSTS ($/HR)	MACHINE RENTAL PER HOUR: BASIC RENTAL COSTS ($/HR)	MARGIN ($/HR)	RENTAL RATE ($/HR)	MACHINE TOTAL COSTS ($/HR)	POWER UNIT TOTAL COSTS ($/HR)	LABOR ($/HR)	CUSTOM WORK RATES: BASIC CUSTOM WORK RATES ($/HR)	MARGIN ($/HR)	CUSTOM RATE ($/HR)	WORK RATE	SUGG. CUSTOM RATE PER ACRE
CULTIVATORS FIELD																
15 FT	4,550	150	3.70	1.00	4.70											
		250	2.38	1.00	3.38	3.38	.51	3.89	3.38	11.99 65 HP	9.00	24.37	3.66	28.03	7.50 AC/HR	
		350	1.82	1.00	2.82											
20 FT	7,850	150	6.38	1.73	8.11											
		250	4.10	1.73	5.83	5.83	.87	6.70	5.83	18.07 85 HP	9.00	32.90	4.94	37.84	10.00 AC/HR	
		350	3.13	1.73	4.86											
25 FT	9,750	150	7.93	2.15	10.08											
		250	5.09	2.15	7.24	7.24	1.09	8.33	7.24	23.62 110 HP	9.00	39.86	5.98	45.84	12.50 AC/HR	
		350	3.89	2.15	6.04											
30 FT	11,600	150	9.43	2.55	11.98											
		250	6.06	2.55	8.61	8.61	1.29	9.90	8.61	27.14 130 HP	9.00	44.75	6.71	51.46	15.00 AC/HR	
		350	4.63	2.55	7.18											
35 FT	14,000	150	11.38	3.08	14.46											
		250	7.31	3.08	10.39	10.39	1.56	11.95	10.39	30.33 150 HP	9.00	49.72	7.46	57.18	17.50 AC/HR	
		350	5.59	3.08	8.67											
40 FT	15,350	150	12.48	3.38	15.86											
		250	8.01	3.38	11.39	11.39	1.71	13.10	11.39	34.15 170 HP	9.00	54.54	8.18	62.72	20.00 AC/HR	
		350	6.13	3.38	9.51											
50 FT	21,500	150	17.48	4.73	22.21											
		250	11.22	4.73	15.95	15.95	2.39	18.34	15.95	36.07 180 HP	9.00	61.02	9.15	70.17	25.00 AC/HR	
		350	8.58	4.73	13.31											
60 FT	25,500	150	20.73	5.61	26.34											
		250	13.31	5.61	18.92	18.92	2.84	21.76	18.92	59.04 HP	9.00	86.96	13.04	100.00	30.00 AC/HR	
		350	10.18	5.61	15.79											
PLOWS																
7 FT	10,950	100	13.35	6.02	19.37											
(5 FURROW)		150	9.53	6.02	15.55	15.55	2.33	17.88	15.55	11.99 65 HP	9.00	36.54	5.48	42.02	3.00 AC/HR	
		200	7.65	6.02	13.67											
9 FT	13,100	100	15.97	7.21	23.18											
(6 FURROW)		150	11.40	7.21	18.61	18.61	2.79	21.40	18.61	13.89 75 HP	9.00	41.50	6.23	47.73	3.50 AC/HR	
		200	9.15	7.21	16.36											
12 FT	16,000	100	19.51	8.80	28.31											
(8 FURROW)		150	13.92	8.80	22.72	22.72	3.41	26.13	22.72	23.62 110 HP	9.00	55.34	8.30	63.64	4.50 AC/HR	
		200	11.18	8.80	19.98											
16 FT	24,100	100	29.39	13.26	42.65											
(11 FURROW)		150	20.97	13.26	34.23	34.23	5.13	39.36	34.23	27.14 130 HP	9.00	70.37	10.56	80.93	6.50 AC/HR	
		200	16.84	13.26	30.10											

DRAWN EQUIPMENT MACHINE/ SIZE	ORIG. COST	ANN. HRS. USE	MACHINE COMPONENT COSTS PER HOUR FIXED COSTS ($/HR)	REPAIR COSTS ($/HR)	TOTAL COSTS ($/HR)	MACHINE RENTAL PER HOUR BASIC RENTAL COSTS ($/HR)	MARGIN ($/HR)	RENTAL RATE ($/HR)	MACHINE TOTAL COSTS ($/HR)	POWER UNIT TOTAL COSTS ($/HR)	LABOR ($/HR)	CUSTOM WORK RATES BASIC CUSTOM WORK RATES ($/HR)	MARGIN ($/HR)	CUSTOM RATE ($/HR)	WORK RATE	SUGG. CUSTOM RATE PER ACRE
RODWEEDER NO/MULTIPLX																
24 FT	5,000	060	10.16	2.75	12.91											
		100	6.53	2.75	9.28	9.28	1.39	10.67	9.28	11.99 65 HP	9.00	30.27	4.54	34.81	13.00 AC/HR	
		140	4.99	2.75	7.74											
30 FT	6,700	060	13.62	3.69	17.31											
		100	8.74	3.69	12.43	12.43	1.86	14.29	12.43	13.89 75 HP	9.00	35.32	5.30	40.62	16.50 AC/HR	
		140	6.69	3.69	10.38											
36 FT	8,000	060	16.26	4.40	20.66											
		100	10.44	4.40	14.84	14.84	2.23	17.07	14.84	21.23 95 HP	9.00	45.07	6.76	51.83	17.50 AC/HR	
		140	7.98	4.40	12.38											
42 FT	10,600	060	21.54	5.83	27.37											
		100	13.83	5.83	19.66	19.66	2.95	22.61	19.66	23.62 110 HP	9.00	52.28	7.84	60.12	21.00 AC/HR	
		140	10.58	5.83	16.41											
48 FT	14,700	060	29.87	8.09	37.96											
		100	19.18	8.09	27.27	27.27	4.09	31.36	27.27	27.14 130 HP	9.00	63.41	9.51	72.92	27.00 AC/HR	
		140	14.67	8.09	22.76											
60 FT	18,750	060	38.10	10.31	48.41											
		100	24.47	10.31	34.78	34.78	5.22	40.00	34.78	30.33 150 HP	9.00	74.11	11.12	85.23	33.00 AC/HR	
		140	18.71	10.31	29.02											
RODWEEDERS W/MULTIPLX																
24 FT	6,350	060	12.90	3.49	16.39											
		100	8.29	3.49	11.78	11.78	1.77	13.55	11.78	13.89 75 HP	9.00	34.67	5.20	39.87	13.00 AC/HR	
		140	6.34	3.49	9.83											
30 FT	8,400	060	17.07	4.62	21.69											
		100	10.96	4.62	15.58	15.58	2.34	17.92	15.58	18.07 85 HP	9.00	42.65	6.40	49.05	16.50 AC/HR	
		140	8.38	4.62	13.00											
36 FT	9,900	060	20.12	5.45	25.57											
		100	12.92	5.45	18.37	18.37	2.76	21.13	18.37	23.62 110 HP	9.00	50.99	7.65	58.64	17.50 AC/HR	
		140	9.88	5.45	15.33											
42 FT	10,600	060	21.54	5.83	27.37											
		100	13.83	5.83	19.66	19.66	2.95	22.61	19.66	23.62 110 HP	9.00	52.28	7.84	60.12	21.00 AC/HR	
		140	10.58	5.83	16.41											
48 FT	14,650	060	29.77	8.06	37.83											
		100	19.12	8.06	27.18	27.18	4.08	31.26	27.18	27.14 130 HP	9.00	63.32	9.50	72.82	27.00 AC/HR	
		140	14.62	8.06	22.68											
60 FT	20,250	060	41.15	11.14	52.29											
		100	26.43	11.14	37.57	37.57	5.64	43.21	37.57	34.15 170 HP	9.00	80.72	12.11	92.83	33.00 AC/HR	
		140	20.21	11.14	31.35											

DRAWN EQUIPMENT MACHINE/ SIZE	ORIG. COST	ANN. HRS. USE	MACHINE COMPONENT COSTS PER HOUR: FIXED COSTS ($/HR)	REPAIR COSTS ($/HR)	TOTAL COSTS ($/HR)	MACHINE RENTAL PER HOUR: BASIC RENTAL COSTS ($/HR)	MARGIN ($/HR)	RENTAL RATE ($/HR)	MACHINE TOTAL COSTS ($/HR)	POWER UNIT TOTAL COSTS ($/HR)	LABOR ($/HR)	CUSTOM WORK RATES: BASIC CUSTOM WORK RATES ($/HR)	MARGIN ($/HR)	CUSTOM RATE ($/HR)	WORK RATE	SUGG. CUSTOM RATE PER ACRE
TANDEM DISCS																
12 FT	6,350	100	7.84	1.91	9.75											
		150	5.52	1.91	7.43	7.43	1.11	8.54	7.43	11.99 65 HP	9.00	28.42	4.26	32.68	5.00 AC/HR	
		200	4.35	1.91	6.26											
16 FT	10,150	100	12.53	3.05	15.58											
		150	8.83	3.05	11.88	11.88	1.78	13.66	11.88	18.07 85 HP	9.00	38.95	5.84	44.79	7.00 AC/HR	
		200	6.96	3.05	10.01											
20 FT	12,200	100	15.06	3.66	18.72											
		150	10.61	3.66	14.27	14.27	2.14	16.41	14.27	23.62 110 HP	9.00	46.89	7.03	53.92	9.00 AC/HR	
		200	8.37	3.66	12.03											
24 FT	16,650	100	20.55	5.00	25.55											
		150	14.49	5.00	19.49	19.49	2.92	22.41	19.49	27.14 130 HP	9.00	55.63	8.34	63.97	11.00 AC/HR	
		200	11.42	5.00	16.42											
28 FT	20,200	100	24.93	6.06	30.99											
		150	17.57	6.06	23.63	23.63	3.54	27.17	23.63	30.33 150 HP	9.00	62.96	9.44	72.40	12.50 AC/HR	
		200	13.85	6.06	19.91											
32 FT	23,100	100	28.51	6.93	35.44											
		150	20.10	6.93	27.03	27.03	4.05	31.08	27.03	36.07 180 HP	9.00	72.10	10.82	82.92	14.50 AC/HR	
		200	15.84	6.93	22.77											
AIR SEEDERS (INCL. CULT)																
24 FT	26,700	060	54.26	12.02	66.28											
		100	34.84	12.02	46.86	46.86	7.03	53.89	46.86	27.14 130 HP	9.00	83.00	12.45	95.45	12.00 AC/HR	
		140	26.65	12.02	38.67											
28 FT	31,100	060	63.20	14.00	77.20											
		100	40.59	14.00	54.59	54.59	8.19	62.78	54.59	30.33 150 HP	9.00	93.92	14.09	108.01	14.00 AC/HR	
		140	31.04	14.00	45.04											
31-35 FT	35,600	060	72.34	16.02	88.36											
		100	46.46	16.02	62.48	62.48	9.37	71.85	62.48	34.15 170 HP	9.00	105.63	15.84	121.47	16.00 AC/HR	
		140	35.53	16.02	51.55											
37 FT	40,800	060	82.91	18.36	101.27											
		100	53.24	18.36	71.60	71.60	10.74	82.34	71.60	36.07 180 HP	9.00	116.67	17.50	134.17	17.50 AC/HR	
		140	40.72	18.36	59.08											
45 FT	42,100	060	85.55	18.95	104.50											
		100	54.94	18.95	73.89	73.89	11.08	84.97	73.89	59.04 HP	9.00	141.93	21.29	163.22	22.50 AC/HR	
		140	42.02	18.95	60.97											

DRAWN EQUIPMENT MACHINE/ SIZE	ORIG. COST	ANN. HRS. USE	MACHINE COMPONENT COSTS PER HOUR: FIXED COSTS ($/HR)	REPAIR COSTS ($/HR)	TOTAL COSTS ($/HR)	MACHINE RENTAL PER HOUR: BASIC RENTAL COSTS ($/HR)	MARGIN ($/HR)	RENTAL RATE ($/HR)	MACHINE TOTAL COSTS ($/HR)	POWER UNIT TOTAL COSTS ($/HR)	LABOR ($/HR)	CUSTOM WORK RATES: BASIC CUSTOM WORK RATES ($/HR)	MARGIN ($/HR)	CUSTOM RATE ($/HR)	WORK RATE	SUGG. CUSTOM RATE PER ACRE
DISCERS W/ SEED + FERT																
15-16 FT	9,200	100	11.36	2.76	14.12											
		150	8.00	2.76	10.76	10.76	1.61	12.37	10.76	13.89 75 HP	9.00	33.65	5.05	38.70	6.50 AC/HR	
		200	6.31	2.76	9.07											
18 FT	10,400	100	12.84	3.12	15.96											
		150	9.05	3.12	12.17	12.17	1.83	14.00	12.17	18.07 85 HP	9.00	39.24	5.89	45.13	9.00 AC/HR	
		200	7.13	3.12	10.25											
24-25 FT	16,000	100	19.75	4.80	24.55											
		150	13.92	4.80	18.72	18.72	2.81	21.53	18.72	23.62 110 HP	9.00	51.34	7.70	59.04	11.00 AC/HR	
		200	10.97	4.80	15.77											
30-32 FT	19,650	100	24.26	5.90	30.16											
		150	17.10	5.90	23.00	23.00	3.45	26.45	23.00	30.33 150 HP	9.00	62.33	9.35	71.68	13.50 AC/HR	
		200	13.48	5.90	19.38											
36 FT	23,350	100	28.82	7.01	35.83											
		150	20.31	7.01	27.32	27.32	4.10	31.42	27.32	30.33 150 HP	9.00	66.65	10.00	76.65	16.50 AC/HR	
		200	16.01	7.01	23.02											
45-48 FT	29,700	100	36.66	8.91	45.57											
		150	25.84	8.91	34.75	34.75	5.21	39.96	34.75	36.07 180 HP	9.00	79.82	11.97	91.79	20.50 AC/HR	
		200	20.37	8.91	29.28											
60-64 FT	39,600	100	48.88	11.88	60.76											
		150	34.45	11.88	46.33	46.33	6.95	53.28	46.33	59.04 HP	9.00	114.37	17.16	131.53	31.00 AC/HR	
		200	27.16	11.88	39.04											
DRILL DISC-PRESS																
10-12 FT	12,450	060	25.30	5.60	30.90											
		100	16.25	5.60	21.85	21.85	3.28	25.13	21.85	9.83 55 HP	9.00	40.68	6.10	46.78	5.00 AC/HR	
		140	12.43	5.60	18.03											
20 FT	24,000	060	48.77	10.80	59.57											
		100	31.32	10.80	42.12	42.12	6.32	48.44	42.12	18.07 85 HP	9.00	69.19	10.38	79.57	10.00 AC/HR	
		140	23.95	10.80	34.75											
24 FT	26,300	060	53.44	11.84	65.28											
		100	34.32	11.84	46.16	46.16	6.92	53.08	46.16	23.62 110 HP	9.00	78.78	11.82	90.60	13.00 AC/HR	
		140	26.25	11.84	38.09											
28-30 FT	33,300	060	67.67	14.99	82.66											
		100	43.46	14.99	58.45	58.45	8.77	67.22	58.45	27.14 130 HP	9.00	94.59	14.19	108.78	14.50 AC/HR	
		140	33.24	14.99	48.23											
40 FT	37,600	060	76.41	16.92	93.33											
		100	49.07	16.92	65.99	65.99	9.90	75.89	65.99	34.15 170 HP	9.00	109.14	16.37	125.51	20.00 AC/HR	
		140	37.53	16.92	54.45											

DRAWN EQUIPMENT MACHINE/ SIZE	ORIG. COST	ANN. HRS. USE	MACHINE COMPONENT COSTS PER HOUR: FIXED COSTS ($/HR)	REPAIR COSTS ($/HR)	TOTAL COSTS ($/HR)	MACHINE RENTAL PER HOUR: BASIC RENTAL COSTS ($/HR)	MARGIN ($/HR)	RENTAL RATE ($/HR)	MACHINE TOTAL COSTS ($/HR)	POWER UNIT TOTAL COSTS ($/HR)	LABOR ($/HR)	CUSTOM WORK RATES: BASIC CUSTOM WORK RATES ($/HR)	MARGIN ($/HR)	CUSTOM RATE ($/HR)	WORK RATE	SUGG. CUSTOM RATE PER ACRE
DRILLS HOE																
10-12 FT	11,800	060	23.98	5.31	29.29											
		100	15.40	5.31	20.71	20.71	3.11	23.82	20.71	11.99 65 HP	9.00	41.70	6.26	47.96	6.00 AC/HR	
		140	11.78	5.31	17.09											
14-16 FT	16,750	060	34.04	7.54	41.58											
		100	21.86	7.54	29.40	29.40	4.41	33.81	29.40	13.89 75 HP	9.00	52.29	7.84	60.13	7.50 AC/HR	
		140	16.72	7.54	24.26											
20-21 FT	22,000	060	44.71	9.90	54.61											
		100	28.71	9.90	38.61	38.61	5.79	44.40	38.61	23.62 110 HP	9.00	71.23	10.68	81.91	10.50 AC/HR	
		140	21.96	9.90	31.86											
24-28 FT	28,400	060	57.71	12.78	70.49											
		100	37.06	12.78	49.84	49.84	7.48	57.32	49.84	27.14 130 HP	9.00	85.98	12.90	98.88	13.00 AC/HR	
		140	28.35	12.78	41.13											
30-32 FT	30,200	060	61.37	13.59	74.96											
		100	39.41	13.59	53.00	53.00	7.95	60.95	53.00	30.33 150 HP	9.00	92.33	13.85	106.18	15.50 AC/HR	
		140	30.14	13.59	43.73											
40-42 FT	38,200	060	77.63	17.19	94.82											
		100	49.85	17.19	67.04	67.04	10.06	77.10	67.04	36.07 180 HP	9.00	112.11	16.82	128.93	20.50 AC/HR	
		140	38.13	17.19	55.32											
HARROW DBR W/HARROWS																
40-50 FT	6,200	040	23.61	5.03	28.64											
		060	16.59	5.03	21.62	21.62	3.24	24.86	21.62	11.99 65 HP	9.00	42.61	6.39	49.00	26.00 AC/HR	
		080	13.21	5.03	18.24											
50-60 FT	7,250	040	27.61	5.88	33.49											
		060	19.39	5.88	25.27	25.27	3.79	29.06	25.27	18.07 85 HP	9.00	52.34	7.85	60.19	30.00 AC/HR	
		080	15.45	5.88	21.33											
60-70 FT	7,400	040	28.18	6.01	34.19											
		060	19.80	6.01	25.81	25.81	3.87	29.68	25.81	21.23 95 HP	9.00	56.04	8.41	64.45	36.00 AC/HR	
		080	15.77	6.01	21.78											
80 FT	10,700	040	40.75	8.69	49.44											
		060	28.62	8.69	37.31	37.31	5.60	42.91	37.31	23.62 110 HP	9.00	69.93	10.49	80.42	40.00 AC/HR	
		080	22.80	8.69	31.49											

DRAWN EQUIPMENT MACHINE/ SIZE	ORIG. COST	ANN. HRS. USE	MACHINE COMPONENT COSTS PER HOUR: FIXED COSTS ($/HR)	REPAIR COSTS ($/HR)	TOTAL COSTS ($/HR)	MACHINE RENTAL PER HOUR: BASIC RENTAL COSTS ($/HR)	MARGIN ($/HR)	RENTAL RATE ($/HR)	MACHINE TOTAL COSTS ($/HR)	POWER UNIT TOTAL COSTS ($/HR)	LABOR ($/HR)	CUSTOM WORK RATES: BASIC CUSTOM WORK RATES ($/HR)	MARGIN ($/HR)	CUSTOM RATE ($/HR)	WORK RATE	SUGG. CUSTOM RATE PER ACRE
HARROW-PACKER																
35-40 FT	12,500	040	47.60	10.15	57.75											
		060	33.44	10.15	43.59	43.59	6.54	50.13	43.59	18.07 85 HP	9.00	70.66	10.60	81.26	19.00 AC/HR	
		080	26.64	10.15	36.79											
45-50 FT	13,900	040	52.93	11.28	64.21											
		060	37.18	11.28	48.46	48.46	7.27	55.73	48.46	23.62 110 HP	9.00	81.08	12.16	93.24	24.00 AC/HR	
		080	29.63	11.28	40.91											
60-70 FT	15,900	040	60.55	12.91	73.46											
		060	42.53	12.91	55.44	55.44	8.32	63.76	55.44	30.33 150 HP	9.00	94.77	14.22	108.99	32.50 AC/HR	
		080	33.89	12.91	46.80											
80 FT	19,150	040	72.92	15.54	88.46											
		060	51.23	15.54	66.77	66.77	10.02	76.79	66.77	36.07 180 HP	9.00	111.84	16.78	128.62	40.00 AC/HR	
		080	40.81	15.54	56.35											
DRILL NO TILL																
10 FT	23,000	060	46.74	10.35	57.09											
		100	30.02	10.35	40.37	40.37	6.06	46.43	40.37	18.07 85 HP	9.00	67.44	10.12	77.56	4.00 AC/HR	
		140	22.96	10.35	33.31											
SWATHERS SP																
15 FT	18,600	060	1.8	37.80	3.72	3.10	.26	44.88								
STANDARD		100	(G)	24.27	3.72	3.10	.26	31.35	9.00	27.99	4.20	32.19	40.35	6.05	46.40	7.50 AC/HR
TABLE		140		18.56	3.72	3.10	.26	25.64								
18 FT	20,550	060	2.0	41.76	4.11	3.44	.26	49.57								
STANDARD		100	(G)	26.82	4.11	3.44	.26	34.63	9.00	30.93	4.64	35.57	43.63	6.54	50.17	9.00 AC/HR
TABLE		140		20.51	4.11	3.44	.26	28.32								
20-22 FT	21,100	060	2.2	42.88	4.22	3.78	.26	51.14								
STANDARD		100	(G)	27.54	4.22	3.78	.26	35.80	9.00	31.76	4.76	36.52	44.80	6.72	51.52	10.50 AC/HR
TABLE		140		21.06	4.22	3.78	.26	29.32								
24-26 FT	24,200	060	2.4	49.18	4.84	4.13	.32	58.47								
STANDARD		100	(G)	31.58	4.84	4.13	.32	40.87	9.00	36.42	5.46	41.88	49.87	7.48	57.35	12.50 AC/HR
TABLE		140		24.15	4.84	4.13	.32	33.44								
21 FT	29,450	060	2.4	59.85	5.89	4.13	.32	70.19								
SLIDING TBL		100	( )	38.43	5.89	4.13	.32	48.77	9.00	44.32	6.65	50.97	57.77	8.67	66.44	10.50 AC/HR
		140		29.39	5.89	4.13	.32	39.73								
25 FT	28,750	060	2.8	58.42	5.75	4.82	.32	69.31								
SLIDING TBL		100	( )	37.52	5.75	4.82	.32	48.41	9.00	43.27	6.49	49.76	57.41	8.61	66.02	12.50 AC/HR
		140		28.70	5.75	4.82	.32	39.59								
30 FT	30,000	060	3.0	60.96	6.00	5.16	.32	72.44								
SLIDING TBL		100	( )	39.15	6.00	5.16	.32	50.63	9.00	45.15	6.77	51.92	59.63	8.94	68.57	15.00 AC/HR
		140		29.94	6.00	5.16	.32	41.42								

DRAWN EQUIPMENT MACHINE/ SIZE	ORIG. COST	ANN. HRS. USE	MACHINE COMPONENT COSTS PER HOUR FIXED COSTS ($/HR)	REPAIR COSTS ($/HR)	TOTAL COSTS ($/HR)	MACHINE RENTAL PER HOUR BASIC RENTAL COSTS ($/HR)	MARGIN ($/HR)	RENTAL RATE ($/HR)	MACHINE TOTAL COSTS ($/HR)	POWER UNIT TOTAL COSTS ($/HR)	LABOR ($/HR)	CUSTOM WORK RATES BASIC CUSTOM WORK RATES ($/HR)	MARGIN ($/HR)	CUSTOM RATE ($/HR)	WORK RATE	SUGG. CUSTOM RATE PER ACRE
SWATHERS PULL-TYPE																
18 FT	6,800	060	13.82	2.38	16.20											
		100	8.87	2.38	11.25	11.25	1.69	12.94	11.25	9.83 55 HP	9.00	30.08	4.51	34.59	9.50 AC/HR	
		140	6.79	2.38	9.17											
20-21 FT	7,500	060	15.24	2.63	17.87											
		100	9.79	2.63	12.42	12.42	1.86	14.28	12.42	9.83 55 HP	9.00	31.25	4.69	35.94	11.50 AC/HR	
		140	7.49	2.63	10.12											
24-26 FT	8,000	060	16.26	2.80	19.06											
		100	10.44	2.80	13.24	13.24	1.99	15.23	13.24	9.83 55 HP	9.00	32.07	4.81	36.88	13.00 AC/HR	
		140	7.98	2.80	10.78											
28 FT	10,950	060	22.25	3.83	26.08											
		100	14.29	3.83	18.12	18.12	2.72	20.84	18.12	9.83 55 HP	9.00	36.95	5.54	42.49	15.00 AC/HR	
		140	10.93	3.83	14.76											
COMBINE SP STANDARD																
10000-	68,100	120	5.0	79.30	20.43	7.70	.42	107.85								
12000		150	(D)	66.06	20.43	7.70	.42	94.61	9.00	86.49	12.97	99.46	103.61	15.54	119.15	5.50 AC/HR
SQ. IN.		180		57.63	20.43	7.70	.42	86.18								
12000-	83,600	120	6.0	97.34	25.08	9.24	.42	132.08								
14000		150	(D)	81.09	25.08	9.24	.42	115.83	9.00	106.17	15.93	122.10	124.83	18.72	143.55	7.00 AC/HR
SQ. IN.		180		70.74	25.08	9.24	.42	105.48								
14000-	92,900	120	6.5	108.17	27.87	10.01	.46	146.51								
17000		150	(D)	90.11	27.87	10.01	.46	128.45	9.00	117.98	17.70	135.68	137.45	20.62	158.07	8.50 AC/HR
SQ. IN.		180		78.61	27.87	10.01	.46	116.95								
18000+	112,600	120	7.0	131.11	33.78	10.78	.63	176.30								
SQ. IN.		150	(D)	109.22	33.78	10.78	.63	154.41	9.00	143.00	21.45	164.45	163.41	24.51	187.92	11.00 AC/HR
		180		95.28	33.78	10.78	.63	140.47								
COMBINE SP ROTARY																
SMALL	77,800	120	4.2	90.59	23.34	6.47	.42	120.82								
		150	(D)	75.47	23.34	6.47	.42	105.70	9.00	98.81	14.82	113.63	114.70	17.21	131.91	7.00 AC/HR
		180		65.83	23.34	6.47	.42	96.06								
MEDIUM	100,700	120	5.5	117.26	30.21	8.47	.46	156.40								
		150	(D)	97.68	30.21	8.47	.46	136.82	9.00	127.89	19.18	147.07	145.82	21.87	167.69	8.50 AC/HR
		180		85.21	30.21	8.47	.46	124.35								
LARGE	118,700	120	7.0	138.21	35.61	10.78	1.05	185.65								
		150	(D)	115.14	35.61	10.78	1.05	162.58	9.00	150.75	22.61	173.36	171.58	25.74	197.32	12.00 AC/HR
		180		100.44	35.61	10.78	1.05	147.88								

DRAWN EQUIPMENT MACHINE/ SIZE	ORIG. COST	ANN. HRS. USE	MACHINE COMPONENT COSTS PER HOUR: FIXED COSTS ($/HR)	REPAIR COSTS ($/HR)	TOTAL COSTS ($/HR)	MACHINE RENTAL PER HOUR: BASIC RENTAL COSTS ($/HR)	MARGIN ($/HR)	RENTAL RATE ($/HR)	MACHINE TOTAL COSTS ($/HR)	POWER UNIT TOTAL COSTS ($/HR)	LABOR ($/HR)	CUSTOM WORK RATES: BASIC CUSTOM WORK RATES ($/HR)	MARGIN ($/HR)	CUSTOM RATE ($/HR)	WORK RATE	SUGG. CUSTOM RATE PER ACRE
COMBINES PULL-TYPE																
10000-12000 SQ. IN.	41,200	120	47.97	19.23	67.20											
		150	39.96	19.23	59.19	59.19	8.88	68.07	59.19	21.23 95 HP	9.00	89.42	13.41	102.83	5.50 AC/HR	
		180	34.86	19.23	54.09											
14000-18000 SQ. IN.	51,400	120	59.85	23.99	83.84											
		150	49.86	23.99	73.85	73.85	11.08	84.93	73.85	27.14 130 HP	9.00	109.99	16.50	126.49	7.00 AC/HR	
		180	43.49	23.99	67.48											
ROTARY PTO LARGE	54,200	120	63.11	25.30	88.41											
		150	52.57	25.30	77.87	77.87	11.68	89.55	77.87	30.33 150 HP	9.00	117.20	17.58	134.78	11.00 AC/HR	
		180	45.86	25.30	71.16											
BALERS STANDARD*																
SMALL	9,300	040	33.83	2.33	36.16											
		080	18.66	2.33	20.99	20.99	3.15	24.14	20.99	11.99 65 HP	9.00	41.98	6.30	48.28	150.00 AC/HR	
		120	13.67	2.33	16.00											
MEDIUM	12,000	040	43.65	3.00	46.65											
		080	24.08	3.00	27.08	27.08	4.06	31.14	27.08	11.99 65 HP	9.00	48.07	7.21	55.28	175.00 AC/HR	
		120	17.64	3.00	20.64											
LARGE	15,000	040	54.56	3.75	58.31											
		080	30.09	3.75	33.84	33.84	5.08	38.92	33.84	11.99 65 HP	9.00	54.83	8.22	63.05	200.00 AC/HR	
		120	22.05	3.75	25.80											
BALER ROUND*																
750-1000 LBS	12,400	030	54.80	3.10	57.90											
		060	30.07	3.10	33.17	33.17	4.98	38.15	33.17	11.99 65 HP	9.00	54.16	8.12	62.28	18.00 AC/HR	
		090	21.52	3.10	24.62											
1500-1800 LBS	16,050	030	70.92	4.01	74.93											
		060	38.92	4.01	42.93	42.93	6.44	49.37	42.93	11.99 65 HP	9.00	63.92	9.59	73.51	11.00 AC/HR	
		090	27.86	4.01	31.87											
3000+ LBS	21,250	030	93.90	5.31	99.21											
		060	51.53	5.31	56.84	56.84	8.53	65.37	56.84	13.89 75 HP	9.00	79.73	11.96	91.69	8.00 AC/HR	
		090	36.88	5.31	42.19											
SP BALE WAGON																
160 BALES (100 HP)	57,500	060	4.0	137.17	13.50	6.88	.35	157.90								
		100	(G)	88.09	13.50	6.88	.35	108.82	9.00	101.59	15.24	116.83	117.82	17.67	135.49	375.00 AC/HR
		140		67.37	13.50	6.88	.35	88.10								

DRAWN EQUIPMENT MACHINE/ SIZE	ORIG. COST	ANN. HRS. USE	MACHINE COMPONENT COSTS PER HOUR: FIXED COSTS ($/HR)	REPAIR COSTS ($/HR)	TOTAL COSTS ($/HR)	MACHINE RENTAL PER HOUR: BASIC RENTAL COSTS ($/HR)	MARGIN ($/HR)	RENTAL RATE ($/HR)	MACHINE TOTAL COSTS ($/HR)	POWER UNIT TOTAL COSTS ($/HR)	LABOR ($/HR)	CUSTOM WORK RATES: BASIC CUSTOM WORK RATES ($/HR)	MARGIN ($/HR)	CUSTOM RATE ($/HR)	WORK RATE	SUGG. CUSTOM RATE PER ACRE
BALE-WAGON PULL-TYPE																
63 BALE	13,300	060	27.03	4.66	31.69											
		100	17.36	4.66	22.02	22.02	3.30	25.32	22.02	9.83 55 HP	9.00	40.85	6.13	46.98	100.00 bls/hr.	
		140	13.27	4.66	17.93											
69 BALE	19,600	060	39.83	6.86	46.69											
		100	25.58	6.86	32.44	32.44	4.87	37.31	32.44	9.83 55 HP	9.00	51.27	7.69	58.96	140.00 bls/hr.	
		140	19.56	6.86	26.42											
104 BALE	22,600	060	45.93	7.91	53.84											
		100	29.49	7.91	37.40	37.40	5.61	43.01	37.40	13.89 75 HP	9.00	60.29	9.04	69.33	208.00 bls/hr.	
		140	22.56	7.91	30.47											
BIG BALE MOVERS *																
5-6 BALE	7,800	040	25.85	2.44	28.29											
		080	14.19	2.44	16.63	16.63	2.49	19.12	16.63	11.99 65 HP	9.00	37.62	5.64	43.26		
		120	10.15	2.44	12.59											
8 BALE	10,200	040	33.80	3.19	36.99											
		080	18.55	3.19	21.74	21.74	3.26	25.00	21.74	18.07 85 HP	9.00	48.81	7.32	56.13		
		120	13.28	3.19	16.47											
FORAGE HARVESTER*																
SMALL	11,650	040	38.61	3.64	42.25											
		080	21.19	.36	21.55	21.55	3.23	24.78	21.55	11.99 65 HP	9.00	42.54	6.38	48.92		
		120	15.17	3.64	18.81											
MEDIUM	16,100	040	53.36	5.03	58.39											
		080	29.28	.50	29.78	29.78	4.47	34.25	29.78	18.07 85 HP	9.00	56.85	8.53	65.38		
		120	20.96	5.03	25.99											
LARGE	19,600	040	64.96	6.13	71.09											
		080	35.65	.61	36.26	36.26	5.44	41.70	36.26	30.33 150 HP	9.00	75.59	11.34	86.93		
		120	25.52	6.13	31.65											
GRINDER MIXER																
80-100 BUS	8,590	100	12.50	1.72	14.22											
		200	6.89	1.72	8.61	8.61	1.29	9.90	8.61	18.07 85 HP	9.00	35.68	5.35	41.03		
		300	5.05	1.72	6.77											
120-130 BUS	12,440	100	18.10	2.49	20.59											
		200	9.98	2.49	12.47	12.47	1.87	14.34	12.47	23.62 110 HP	9.00	45.09	6.76	51.85		
		300	7.31	2.49	9.80											
150 BUS	14,850	100	21.61	2.97	24.58											
		200	11.92	2.97	14.89	14.89	2.23	17.12	14.89	27.14 130 HP	9.00	51.03	7.65	58.68		
		300	8.73	2.97	11.70											

DRAWN EQUIPMENT MACHINE/ SIZE	ORIG. COST	ANN. HRS. USE	MACHINE COMPONENT COSTS PER HOUR FIXED COSTS ($/HR)	REPAIR COSTS ($/HR)	TOTAL COSTS ($/HR)	MACHINE RENTAL PER HOUR BASIC RENTAL COSTS ($/HR)	MARGIN ($/HR)	RENTAL RATE ($/HR)	MACHINE TOTAL COSTS ($/HR)	POWER UNIT TOTAL COSTS ($/HR)	LABOR ($/HR)	CUSTOM WORK RATES BASIC CUSTOM WORK RATES ($/HR)	MARGIN ($/HR)	CUSTOM RATE ($/HR)	WORK RATE	SUGG. CUSTOM RATE PER ACRE
TUB GRINDER																
8 TON	16,350	100	23.79	3.27	27.06											
		200	13.12	3.27	16.39	16.39	2.46	18.85	16.39	23.62 110 HP	9.00	49.01	7.35	56.36		
		300	9.61	3.27	12.88											
15 TON	26,300	100	38.27	5.26	43.53											
		200	21.11	5.26	26.37	26.37	3.96	30.33	26.37	34.15 170 HP	9.00	69.52	10.43	79.95		
		300	15.46	5.26	20.72											
HAY RAKE																
8-81/2 FT	3,450	050	9.64	1.48	11.12											
PARALLEL		070	7.17	1.48	8.65	8.65	1.30	9.95	8.65	6.98 35 HP	9.00	24.63	3.69	28.32	4.50 AC/HR	
BAR		090	5.84	1.48	7.32											
9-91/2 FT	3,950	050	11.04	1.69	12.73											
PARALLEL		070	8.21	1.69	9.90	9.90	1.49	11.39	9.90	6.98 35 HP	9.00	25.88	3.88	29.76	5.00 AC/HR	
BAR		090	6.68	1.69	8.37											
7-71/2 FT	2,550	050	7.13	1.09	8.22											
WHEEL TYPE		070	5.30	1.09	6.39	6.39	.96	7.35	6.39	6.98 35 HP	9.00	22.37	3.36	25.73	4.00 AC/HR	
		090	4.32	1.09	5.41											
9-91/2 FT	2,800	050	7.82	1.20	9.02											
WHEEL TYPE		070	5.82	1.20	7.02	7.02	1.05	8.07	7.02	6.98 35 HP	9.00	23.00	3.45	26.45	5.00 AC/HR	
		090	4.74	1.20	5.94											
LOOSE HAY STACKER																
3 TON	24,000	040	79.54	7.50	87.04											
		080	43.65	7.50	51.15	51.15	7.67	58.82	51.15	21.23 95 HP	9.00	81.38	12.21	93.59	8.00 t/HR	
		120	31.24	7.50	38.74											
6 TON +	37,700	040	124.95	11.78	136.73											
		080	68.57	11.78	80.35	80.35	12.05	92.40	80.35	23.62 110 HP	9.00	112.97	16.95	129.92	14.00 t/HR	
		120	49.08	11.78	60.86											
LOOSE HAY STACK MOVER																
3 TON	5,200	040	17.23	1.63	18.86											
		080	9.46	1.63	11.09	11.09	1.66	12.75	11.09	11.99 65 HP	9.00	32.08	4.81	36.89		
		120	6.77	1.63	8.40											
6 TON	13,200	040	43.75	4.13	47.88											
		080	24.01	4.13	28.14	28.14	4.22	32.36	28.14	21.23 95 HP	9.00	58.37	8.76	67.13		
		120	17.18	4.13	21.31											

DRAWN EQUIPMENT MACHINE/ SIZE	ORIG. COST	ANN. HRS. USE	MACHINE COMPONENT COSTS PER HOUR: FIXED COSTS ($/HR)	REPAIR COSTS ($/HR)	TOTAL COSTS ($/HR)	MACHINE RENTAL PER HOUR: BASIC RENTAL COSTS ($/HR)	MARGIN ($/HR)	RENTAL RATE ($/HR)	MACHINE TOTAL COSTS ($/HR)	POWER UNIT TOTAL COSTS ($/HR)	LABOR ($/HR)	CUSTOM WORK RATES: BASIC CUSTOM WORK RATES ($/HR)	MARGIN ($/HR)	CUSTOM RATE ($/HR)	WORK RATE	SUGG. CUSTOM RATE PER ACRE
LOOSE HAY STACKFEEDER																
2.5 TON	8,550	040	28.34	2.67	31.01											
		080	15.55	2.67	18.22	18.22	2.73	20.95	18.22	9.83 55 HP	9.00	37.05	5.56	42.61		
		120	11.13	2.67	13.80											
4 TON	11,000	040	36.46	3.44	39.90											
		080	20.01	3.44	23.45	23.45	3.52	26.97	23.45	11.99 65 HP	9.00	44.44	6.67	51.11		
		120	14.32	3.44	17.76											
MOWERS SICKLE																
7 FT	3,700	050	10.34	1.59	11.93											
		070	7.69	1.59	9.28	9.28	1.39	10.67	9.28	6.98 35 HP	9.00	25.26	3.79	29.05	3.50 AC/HR	
		090	6.26	1.59	7.85											
9 FT	4,150	050	11.60	1.78	13.38											
		070	8.63	1.78	10.41	10.41	1.56	11.97	10.41	6.98 35 HP	9.00	26.39	3.96	30.35	4.50 AC/HR	
		090	7.02	1.78	8.80											
MOWER CONDITIONER																
7 FT	9,350	050	26.13	4.01	30.14											
		070	19.43	4.01	23.44	23.44	3.52	26.96	23.44	8.49 45 HP	9.00	40.93	6.14	47.07	4.50 AC/HR	
		090	15.82	4.01	19.83											
9 FT	11,100	050	31.02	4.76	35.78											
		070	23.07	4.76	27.83	27.83	4.17	32.00	27.83	8.49 45 HP	9.00	45.32	6.80	52.12	5.50 AC/HR	
		090	18.79	4.76	23.55											
12 FT	13,700	050	38.29	5.87	44.16											
		070	28.48	5.87	34.35	34.35	5.15	39.50	34.35	9.83 55 HP	9.00	53.18	7.98	61.16	6.50 AC/HR	
		090	23.19	5.87	29.06											
14 FT	14,200	050	39.68	6.09	45.77											
		070	29.52	6.09	35.61	35.61	5.34	40.95	35.61	9.83 55 HP	9.00	54.44	8.17	62.61	7.00 AC/HR	
		090	24.03	6.09	30.12											

DRAWN EQUIPMENT MACHINE/ SIZE	ORIG. COST	ANN. HRS. USE	MACHINE COMPONENT COSTS PER HOUR: FIXED COSTS ($/HR)	REPAIR COSTS ($/HR)	TOTAL COSTS ($/HR)	MACHINE RENTAL PER HOUR: BASIC RENTAL COSTS ($/HR)	MARGIN ($/HR)	RENTAL RATE ($/HR)	MACHINE TOTAL COSTS ($/HR)	POWER UNIT TOTAL COSTS ($/HR)	LABOR ($/HR)	CUSTOM WORK RATES: BASIC CUSTOM WORK RATES ($/HR)	MARGIN ($/HR)	CUSTOM RATE ($/HR)	WORK RATE	SUGG. CUSTOM RATE PER ACRE
ROTARY CUTTERS																
5 FT	1,360	050	3.80	.58	4.38											
		070	2.83	.58	3.41	3.41	.51	3.92	3.41	9.83 55 HP	9.00	22.24	3.34	25.58		
		090	2.30	.58	2.88											
5 FT HEAVY DUTY	2,120	050	5.92	.91	6.83											
		070	4.41	.91	5.32	5.32	.80	6.12	5.32	9.83 55 HP	9.00	24.15	3.62	27.77		
		090	3.59	.91	4.50											
6 FT	1,860	050	5.20	.80	6.00											
		070	3.87	.80	4.67	4.67	.70	5.37	4.67	11.99 65 HP	9.00	25.66	3.85	29.51		
		090	3.15	.80	3.95											
6 FT HEAVY DUTY	2,620	050	7.32	1.12	8.44											
		070	5.45	1.12	6.57	6.57	.99	7.56	6.57	11.99 65 HP	9.00	27.56	4.13	31.69		
		090	4.43	1.12	5.55											
12 FT	6,040	050	16.88	2.59	19.47											
		070	12.55	2.59	15.14	15.14	2.27	17.41	15.14	13.89 75 HP	9.00	38.03	5.70	43.73		
		090	10.22	2.59	12.81											
15 FT	9,390	050	26.24	4.02	30.26											
		070	19.52	4.02	23.54	23.54	3.53	27.07	23.54	13.89 75 HP	9.00	46.43	6.96	53.39		
		090	15.89	4.02	19.91											

GRAIN AUGERS			FUEL GALS.	FIXED COSTS	REPAIR COSTS	FUEL COSTS	LUBE OIL	TOTAL COSTS	
6 INCH	1,775	025	.2	8.56	.71	.34	.04	9.65	
33-37 FT		050	(G)	4.63	.71	.34	.04	5.72	
(W 10HP)		075		3.31	.71	.34	.04	4.40	
7 INCH	2,030	025	.3	9.78	.81	.52	.06	11.17	SEE
38-41 FT		050	(G)	5.30	.81	.52	.06	6.69	
(W/16HP)		075		3.78	.81	.52	.06	5.17	
8 INCH	2,340	025	.0	11.28	.94			12.22	GRAIN
40-51 FT		050	( )	6.11	.94			7.05	
PTO		075		4.36	.94			5.30	
10 INCH	4,120	025	.0	19.86	1.65			21.51	HAULING
45-75 FT		050	( )	10.75	1.65			12.40	
PTO		075		7.68	1.65			9.33	
16 INCH	9,680	025	.0	46.66	3.87			50.53	SECTION
60-80 FT		050	( )	25.26	3.87			29.13	
PTO		075		18.03	3.87			21.90	

DRAWN EQUIPMENT MACHINE/ SIZE	ORIG. COST	ANN. HRS. USE	MACHINE COMPONENT COSTS PER HOUR: FIXED COSTS ($/HR)	REPAIR COSTS ($/HR)	TOTAL COSTS ($/HR)	MACHINE RENTAL PER HOUR: BASIC RENTAL COSTS ($/HR)	MARGIN ($/HR)	RENTAL RATE ($/HR)	MACHINE TOTAL COSTS ($/HR)	POWER UNIT TOTAL COSTS ($/HR)	LABOR ($/HR)	CUSTOM WORK RATES: BASIC CUSTOM WORK RATES ($/HR)	MARGIN ($/HR)	CUSTOM RATE ($/HR)	WORK RATE	SUGG. CUSTOM RATE PER ACRE
BULK APPLICATORS																
20-24 FT	5,450	060	13.84	3.82	17.66											
		080	10.94	3.82	14.76	14.76	2.21	16.97	14.76	9.83 55 HP	9.00	33.59	5.04	38.63	15.50 AC/HR	
		100	9.29	3.82	13.11											
28 FT	6,350	060	16.12	4.45	20.57											
		080	12.74	4.45	17.19	17.19	2.58	19.77	17.19	11.99 65 HP	9.00	38.18	5.73	43.91	20.00 AC/HR	
		100	10.83	4.45	15.28											
36-40 FT	8,950	060	22.72	6.27	28.99											
		080	17.96	6.27	24.23	24.23	3.63	27.86	24.23	18.07 85 HP	9.00	51.30	7.70	59.00	25.00 AC/HR	
		100	15.26	6.27	21.53											
FRONT END LOADER																
STANDARD	3,740	080	7.12	.63	7.75											
W/BUCKET		100	6.00	.63	6.63	6.63	.99	7.62	6.63	11.99 65 HP	9.00	27.62	4.14	31.76		
		120	5.31	.63	5.94											
HEAVY DUTY	4,670	080	8.89	.78	9.67											
W/BUCKET		100	7.50	.78	8.28	8.28	1.24	9.52	8.28	21.23 95 HP	9.00	38.51	5.78	44.29		
		120	6.64	.78	7.42											
MANURE SPREADER																
108-150 BUS	3,960	060	10.05	2.77	12.82											
		080	7.94	2.77	10.71	10.71	1.61	12.32	10.71	9.83 55 HP	9.00	29.54	4.43	33.97		
		100	6.75	2.77	9.52											
170-185 BUS	4,870	060	12.36	3.41	15.77											
		080	9.77	3.41	13.18	13.18	1.98	15.16	13.18	9.83 55 HP	9.00	32.01	4.80	36.81		
		100	8.30	3.41	11.71											
205-230 BUS	6,520	060	16.55	4.56	21.11											
		080	13.08	4.56	17.64	17.64	2.65	20.29	17.64	11.99 65 HP	9.00	38.63	5.79	44.42		
		100	11.12	4.56	15.68											
275-295 BUS	7,100	060	18.02	4.97	22.99											
		080	14.24	4.97	19.21	19.21	2.88	22.09	19.21	13.89 75 HP	9.00	42.10	6.32	48.42		
		100	12.11	4.97	17.08											
300-340 BUS	7,740	060	19.65	5.42	25.07											
		080	15.53	5.42	20.95	20.95	3.14	24.09	20.95	18.07 85 HP	9.00	48.02	7.20	55.22		
		100	13.20	5.42	18.62											
350-385 BUS	9,940	060	25.23	6.96	32.19											
		080	19.94	6.96	26.90	26.90	4.04	30.94	26.90	21.23 95 HP	9.00	57.13	8.57	65.70		
		100	16.95	6.96	23.91											

DRAWN EQUIPMENT MACHINE/ SIZE	ORIG. COST	ANN. HRS. USE	MACHINE COMPONENT COSTS PER HOUR: FIXED COSTS ($/HR)	REPAIR COSTS ($/HR)	TOTAL COSTS ($/HR)	MACHINE RENTAL PER HOUR: BASIC RENTAL COSTS ($/HR)	MARGIN ($/HR)	RENTAL RATE ($/HR)	MACHINE TOTAL COSTS ($/HR)	POWER UNIT TOTAL COSTS ($/HR)	LABOR ($/HR)	CUSTOM WORK RATES: BASIC CUSTOM WORK RATES ($/HR)	MARGIN ($/HR)	CUSTOM RATE ($/HR)	WORK RATE	SUGG. CUSTOM RATE PER ACRE
LIQUID MANURE SPRD																
1000-1200 GALLON	10,100	120	12.82	3.82	16.64											
		140	11.58	3.82	15.40	15.40	2.31	17.71	15.40	13.89 75 HP	9.00	38.29	5.74	44.03		
		160	10.76	3.82	14.58											
2000-2500 GALLON	16,160	120	20.51	6.12	26.63											
		140	18.53	6.12	24.65	24.65	3.70	28.35	24.65	21.23 95 HP	9.00	54.88	8.23	63.11		
		160	17.22	6.12	23.34											
POST POUNDER																
	2,600	080	4.95	.44	5.39											
		100	4.17	.44	4.61	4.61	.69	5.30	4.61	9.83 55 HP	9.00	23.44	3.52	26.96		
		120	3.69	.44	4.13											
PNEUMATIC GRAIN MOVER																
1000-1200 BUS/HR	9,600	025	46.27	3.84	50.11											
		050	25.06	3.84	28.90	28.90	4.34	33.24	28.90	13.89 75 HP	9.00	51.79	7.77	59.56	1000.00 bu./hr.	
		075	17.89	3.84	21.73											
1500-1800 BUS/HR	13,000	025	62.66	5.20	67.86											
		050	33.93	5.20	39.13	39.13	5.87	45.00	39.13	21.23 95 HP	9.00	69.36	10.40	79.76	600.00 bu./hr.	
		075	24.22	5.20	29.42											
ROCK PICKER PADDLE TYPE FORK TYPE	3,830	060	9.72	2.68	12.40											
		080	7.68	2.68	10.36	10.36	1.55	11.91	10.36	9.83 55 HP	9.00	29.19	4.38	33.57		
		100	6.53	2.68	9.21											
HYDRAULIC (3 PADDLE)	6,970	060	17.69	4.88	22.57											
		080	13.98	4.88	18.86	18.86	2.83	21.69	18.86	21.23 95 HP	9.00	49.09	7.36	56.45		
		100	11.88	4.88	16.76											
PTO (3 PADDLE)	8,510	060	21.60	5.96	27.56											
		080	17.07	5.96	23.03	23.03	3.45	26.48	23.03	11.99 65 HP	9.00	44.02	6.60	50.62		
		100	14.51	5.96	20.47											
GROUND (3 PADDLE)	5,110	060	12.97	3.58	16.55											
		080	10.25	3.58	13.83	13.83	2.07	15.90	13.83	9.83 55 HP	9.00	32.66	4.90	37.56		
		100	8.71	3.58	12.29											

DRAWN EQUIPMENT MACHINE/ SIZE	ORIG. COST	ANN. HRS. USE	MACHINE COMPONENT COSTS PER HOUR: FIXED COSTS ($/HR)	REPAIR COSTS ($/HR)	TOTAL COSTS ($/HR)	MACHINE RENTAL PER HOUR: BASIC RENTAL COSTS ($/HR)	MARGIN ($/HR)	RENTAL RATE ($/HR)	MACHINE TOTAL COSTS ($/HR)	POWER UNIT TOTAL COSTS ($/HR)	LABOR ($/HR)	CUSTOM WORK RATES: BASIC CUSTOM WORK RATES ($/HR)	MARGIN ($/HR)	CUSTOM RATE ($/HR)	WORK RATE	SUGG. CUSTOM RATE PER ACRE
ROCK RAKES																
12 FT	4,960	060	12.59	3.47	16.06											
		080	9.95	3.47	13.42	13.42	2.01	15.43	13.42	11.99 65 HP	9.00	34.41	5.16	39.57		
		100	8.46	3.47	11.93											
14 FT	6,020	060	15.28	4.21	19.49											
		080	12.08	4.21	16.29	16.29	2.44	18.73	16.29	11.99 65 HP	9.00	37.28	5.59	42.87		
		100	10.26	4.21	14.47											
ROCKOMATIC W/ROCKRAKE																
20' PTO	15,600	060	39.60	10.92	50.52											
		080	31.30	10.92	42.22	42.22	6.33	48.55	42.22	21.23 95 HP	9.00	72.45	10.87	83.32		
		100	26.60	10.92	37.52											
20' HYD	17,500	060	44.43	12.25	56.68											
		080	35.11	12.25	47.36	47.36	7.10	54.46	47.36	21.23 95 HP	9.00	77.59	11.64	89.23		
		100	29.84	12.25	42.09											
SNOW BLOWER																
7 FT	5,280	020	31.81	4.62	36.43											
FRONT MOUNT		040	17.23	4.62	21.85	21.85	3.28	25.13	21.85	21.23 95 HP	9.00	52.08	7.81	59.89		
		100	8.47	4.62	13.09											
8 FT	5,530	020	33.32	4.84	38.16											
FRONT MOUNT		040	18.04	4.84	22.88	22.88	3.43	26.31	22.88	21.23 95 HP	9.00	53.11	7.97	61.08		
		100	8.88	4.84	13.72											
7 FT	2,010	020	12.11	1.76	13.87											
REAR MOUNT		040	6.56	1.76	8.32	8.32	1.25	9.57	8.32	11.99 65 HP	9.00	29.31	4.40	33.71		
		100	3.23	1.76	4.99											
8 FT	2,480	020	14.94	2.17	17.11											
REAR MOUNT		040	8.09	2.17	10.26	10.26	1.54	11.80	10.26	11.99 65 HP	9.00	31.25	4.69	35.94		
		100	3.98	2.17	6.15											
SPRAYERS																
400 GAL	5,450	030	22.15	4.91	27.06											
(60-70 FT)		050	14.22	4.91	19.13	19.13	2.87	22.00	19.13	8.49 45 HP	9.00	36.62	5.49	42.11	22.00 AC/HR	
		070	10.88	4.91	15.79											
800 GAL	8,050	030	32.72	7.25	39.97											
(70-80 FT)		050	21.01	7.25	28.26	28.26	4.24	32.50	28.26	9.83 55 HP	9.00	47.09	7.06	54.15	25.00 AC/HR	
		070	16.07	7.25	23.32											
TRUCK	3,650	030	14.83	3.29	18.12											
MOUNTED		050	9.53	3.29	12.82	12.82	1.92	14.74	12.82	9.83 55 HP	9.00	31.65	4.75	36.40	35.00 AC/HR	
310 GAL-40'		070	7.29	3.29	10.58											

Custom Grain Hauling

A Farm to Market 0-12 miles

a) Truck 3 ton 320 Bushel Truck Cost $50/hour (excl labour)
b) Auger 7"x40' Gas Engine Auger Costs $7/hour (excl labour)

Distance to Market (miles)	3	6	9	12
Auger Costs Per Load	$2.34 (20 min)	$2.34 (20)	$2.34 (20)	$2.34 (20)
Truck Costs Per Load	$14.17 (17)	$21.67 (26)	$29.17 (35)	$35.34 (43)
Labour Costs Per load	$6.30 (42)	$7.65 (51)	$9.00 (60)	$10.20 (68)
Total Cost Per Load	$22.81	$31.66	$40.51	$48.38
Plus 15% Margin	3.43	4.75	6.08	7.26
Custom Rate Per Load	$26.24	$36.41	$46.59	$55.64
Suggested Custom Rate	8.2¢ per Bushel for first 3 miles 1¢ per mile thereafter			

Note: As the miles to market increase the cost of the haul increases. Todays commercial hauling involves large grain trucks with trailers. This allows for the "fixed costs" of the units to be spread over a larger amount of grain per haul, thus keeping within the above rate, even with long hauls.

B. Field to Yard

a) Truck - 3 Ton, 300 Bushel/Trip: Truck Costs $5/Hour (excl. labour)
b) Auger - 7" x 40' Gas Engine: Auger Costs $7/hour (excl. labour)
c) labour - $9.00/hour
d) Unload Time: 11 minutes at Bin (truck engine and PTO running 5 minutes)

1) Time Use

Distance: Field to Yard (Miles)	1/2	1	1 1/2	2	3	4
Travel Time to Yard and Return (min)	4	6.5	8.5	10	12	15.5
Total Unload Time at Bin (min)	11	11	11	11	11	11
(Time truck running during unload at bin)	5	5	5	5	5	5
Time: Unload at combine(s) and travel in field unload twice from one combine or one each from two combines	10	10	10	10	10	10

Waiting Time in Field (truck not running) (min)						
a) hauling from one combine	47	44.5	42.5	41	39	35.5
b) hauling from two combines	11	8.5	6.5	5	3	0
Total Time/Trip						
a) hauling from one combine	60	60	60	72	72	72
b) hauling from two combines	36	36	30	36	36	36
2) Costs Components/Trip						
a) Truck Costs/hour						
one combine	15.84	17.92	19.58	20.83	22.50	25.41
two combines	31.67	35.80	39.17	41.60	45.00	50.83
b) Auger Cost/hour	1.29	1.29	1.29	1.29	1.29	1.29
c) Labour Costs/Trip						
- hauling from one combine	10.80	10.80	10.80	10.80	10.80	10.80
- hauling from two combines	5.40	5.40	5.40	5.40	5.40	5.40
3) Custom Rate/Hour (incl. 15% margin)						
Hauling from one Cominbe	30.49	32.89	34.80	36.23	38.15	41.50
Hauling from Two Combines	44.78	49.53	53.41	56.27	60.11	66.82

Note: From field to bin suggested rate is 10¢ per bushel for the first 1/2 mile plus .5¢ per bushel per mile thereafter.

Appendix A

Combine Cleaning and Separating Area (in^2)
(excluding rotary combines)

Model No.	CI. and Sep. Area*	Model No.	CI. and Sep. Area*
Co-op Implements		Massey Ferguson	
9600	10,933	540	10,700
		550	12,240
Gleaner (Allis-Chalmers)		850	16,390
F_3	10,790	851	16,390
M_3	14,500	860	18,865
L_3	17,155		
John Deere			
4420	11,070		
6601	11,476		
6620	12,417		
7720 & 7721	15,511		
8820	18,644		

* This figure represents the sum of the separating area and the cleaning area. Separating area includes the area of the straw walkers, concaves, and transition grate. Cleaning area is a chaffer sieve, chaffer extension and cleaning sieve.

Combine Threshing Capacities

Combine Size	App. bus/hour Field Efficiency (100%)	(69%)	App. ac/hour Field Efficiency (100%)	(69%)
Self Propelled				
8,000-10,000 sq in	180	125	6.5	4.5
10,000-12,000 sq in	220	150	8.0	5.5
12,000-14,000 sq in	285	195	10.0	7.0
14,000-17,000 sq in	340	235	13.0	9.0
18,000 + sq in	400	275	14.5	10.0
Pull Type				
10,000-12,000 sq in	210	145	7.5	10.0
12,000-14,000 sq in	260	180	9.5	6.5
14,000 + sq in	320	220	11.5	9.0

(a) Assumptions - Wheat crop

Rotary Combines	Model
S.P.	
Small (5.5-8.5ac/hr)	IHC-1420, IHC-1440, NH TR-75
Medium (6.5-10.5 ac/hr)	IHC-1460, NH-TR-85, R-6, R-5
Large (11-14 ac/hr)	IHC-1480, R-7, NH-TR-95
P.T.O.	
Large	IHC-1482, Vers-2000

Appendix B

Rental Rate
Calculation Worksheet
Machinery Rental Rates

Machine_____ Original Cash Cost _____

Basic Rental Cost (Per Hour)

Fixed Costs: _____ (Rate/hr*) x _____ (No. of $1000 orig. cash cost) = (A) _____

Repairs: _____ (Rate/hr*) x _____ (No. of $1000 orig. cash cost) = (B) _____

Basic Rental Cost (C) (A + B) $ _____/hr

Rental Margin = _____ (Suggested Rate 15%) x _____ (Basic Retail Costs-C) = (D) $ _____/hr

Rental Rate

Rental Rate Per Hour (C+D) = $_____/hr
Other Charges _____
Adjusted Rental _____
Rate Per Hour _____

* Refer to "Machinery Cost Calculation Guides" (Col. D for fixed Costs, Col E for repair costs)

Appendix C

Custom Rate
Calculation Worksheet
Machinery Custom Rates

Operation _____

Power Unit _____ Original Cash Cost _____
Tractor, SP Machine

Machine _____ Original Cash Cost _____
Tillage Implements, PTO Machine, Other

Power Unit Costs (Per Hour)

Fixed Costs = _____ (Rate/Hr*) x _____ (No. of $1000 Orig. cash cost) = _____ (1)

Variable Costs

Fuel = _____ (Gal./Hr.) x _____ (Price/Gal.) = _____ (2)

Oil & Grease 35¢/100 Hp = _____ (3)

Repairs = _____ (Rate/Hr*) x _____ (No. of $1000 Orig. cash cost) = _____ (4)

Total Cost (Power Unit) _____ (A) _____
(1 + 2 + 3 + 4)

Machine Costs (Per Hour)

Fixed Costs = _____ (Rate/Hr*) x _____ (No. of $1000 Orig. Cash Cost) x ____ (5)

Variable Costs = _____ (Rate/Hr*) x _____ (No. of $1000 Orig. Cash Cost) (6)

Total Costs (Machine) _____ (B) _____
(5 + 6)

* Refer to Machinery Cost Calculation Guides" (Col. D for fixed costs, Col E for repair costs)

Labour Cost (Per Hour) _____ (C) _____

Total Costs (Power Unit, Machine, Labour) _____
(A + B + C)

Margin (Per Hour) = _____ x _____ = (D) _____
Suggested Rate 15% (A + B + C)

Total Charge Per Hour _____
(A + B + C + D)
Acres Per Hour* _____
Charge Per Acre _____
Other Charges _____
Adjusted Charge _____

Note formulas (Appendix C). Where appropriate, substitute acres with other units (e.g. bales, tons)

Notes:

A. Estimated average annual farm use.*
B. Estimated average number of years of useful life.
C. Repair Rates are estimates based on average conditions. Adjustments are necessary for varying conditions.
D. Fixed costs per hour: Depreciation, Investment Cost, Insurance and Housing.

i) Depreciation/hr = $\dfrac{\dfrac{\text{Original Cash Cost - Salvage Value}}{\text{Years Lifetime}}}{\text{Annual Hours Use}}$

ii) Investment Cost/hr = $\dfrac{\dfrac{\text{Original Cash Cost + Salvage Value}}{2} \times 11.0\%}{\text{Annual Hours Use}}$

iii) Insurance & Housing/hr= $\dfrac{\text{Original Cash Cost} \times 1\%}{\text{Annual Hours Use}}$

E. Repair Costs calculated on an hourly basis per $1,000 original cost

$\dfrac{\text{Original Cost}}{1000}$ x Applicable cost factor for Column E.

* 11% assumes 50% borrowed - 50% owned

Acres Per Hour

A. Tillage Operations (82.5% field efficiency) $\dfrac{\text{Machine Width (ft) x Speed (mph)}}{10}$

B. Seeding and Harvesting (69% field efficiency) $\dfrac{\text{Machine Width (ft) x Speed (mph)}}{12}$

* The combines have had an extra range of annual hours of use added. This allows for more accurate estimation of custom combining rates.

Appendix D

Machinery Cost Calculation Guides

Machine	Annual Use Hrs	Dep'n Life Yrs	Average Annual Repair Rate % Orig Cash Cost	Fixed Cost/ Hour/ $1000 Orig Cash Cost	Repair Cost/ Hour/ $1000 Orig Cash Cost
Tractor 2WD	400	14.5		0.3314	
	600	13	5	0.2329	0.0833
	800	11.5		0.1860	
Tractors 4WD	300	15		0.4350	
	400	14	4	0.3370	0.0667
	500	13		0.2795	
Cultivators	150	17.5	Sand-clay	0.8129	
	250	15	3.0-8.0	0.5220	0.22
	350	13		0.3992	
Discers &	100	17		1.2344	
Tandem Discs	150	15	4.5	0.8700	0.3
	200	13.5		0.6858	
Rodweeders	60	17.5		2.0321	
	100	15	5.5	1.3050	0.55
	140	13		0.9981	
Seed Drills	60	17.5		2.0321	
Airseeders	100	15	4.5	1.3050	0.45
	140	13		0.9981	
Harrows	40	11		3.8080	
Packers	60	10	3	2.6750	0.8117
	80	9		2.1313	
Sprayers	30	17.5		4.0643	
	50	15	4.5	2.6100	0.9
	70	13		1.9962	
Stone Pickers	60	11		2.5386	
Bulk Applicators	80	10	2.5	2.0063	0.7
	100	9		1.7050	
Rock Rakes	60	11		2.5386	
Manure Spreaders	80	10	2.5	2.0063	0.7
	100	9		1.7050	

Front End Loaders	80	11		1.9040	
Post Pounder	100	10	1.7	1.6050	0.168
	120	9		1.4208	
Combines PTO	120	13		1.1644	
(Incl. Rotary)	150	12	7	0.9700	0.4667
	180	11		0.8462	
	350	8.5		0.5039	
Combines SP	120	13		1.1644	
(Incl. Rotary)	150	12	4.5	0.9700	0.3
	180	11		0.8462	
	350	8.5		0.5039	
Swathers PTO	60	17.5		2.0321	
Bale Wagons PTO	100	15	3.5	1.3050	0.35
	140	13		0.9981	
Swathers SP	60	17.5		2.0321	
Bale Wagons SP	100	15	2	1.3050	0.2
	140	13		0.9981	
Mowers,Rakes,Rotary	50	13		2.7946	
Cutter & Conditioner	70	12	2	2.0786	0.4286
	90	11		1.6924	
Forage Harvesters	40	14.5		3.3142	
Bale Movers &	80	12	2.5	1.8188	0.3125
Stackers	120	10.5		1.3018	
Liquid Manure	120	11		1.2693	
Spreaders	140	10	2.5	1.1464	0.3786
	160	9		1.0656	
Balers (PT)	40	12		3.6375	
Bale Thrower	80	10	2	2.0063	0.25
	120	8.5		1.4699	
Balers Large	30	14.5		4.4190	
Round	60	12	1.5	2.4250	0.25
	90	10.5		1.7357	
Truck 1/2 Ton	100	16		1.2675	
	120	15	3.5	1.0875	0.2917
	140	14		0.9628	
Trucks - Grain	100	16		1.2675	
	120	15	4.5	1.0875	0.375
	140	14		0.9628	

Grain Augers &	25	18		4.8200	
Pneumatic Grain	50	15	2	2.6100	0.4
Movers	75	13		1.8631	
Grinder Mixers	100	12		1.4550	
Tub Grinders	200	10	4	0.8025	0.2
	300	8.5		0.5879	
Snow Blowers	20	18		6.0250	
	40	15	3.5	3.2625	0.875
	100	10		1.6050	
Plows	100	17.5		1.2193	
	150	15	8.25	0.8700	0.55
	200	13		0.6987	

Appendix E

Factors to Consider When Custom Hiring

Custom hiring is a business arrangement. The terms of the arrangement should be written in a formal agreement. If unwritten, the terms are more likely to be misunderstood in case of a dispute.

The following should be considered in a custom hiring agreement.

Timeliness

Significant losses can occur if an operation is not started or completed on time. To facilitate planning, a custom hiring agreement should include a schedule of operations for both parties. For example, when the custom combiner is picking up swathed grain, the schedule would outline time periods for swathing by the owner and combining by the custom operator. Such a schedule would be subject to weather conditions and crop maturity.

Operations

The parties should write into the agreement the exact operations to be performed by each party and the machine, materials and labour to be supplied by each.

Rate Schedule

The custom operator should for each operation to be performed stipulate the rate on the basis of acreage, time (hour, day, week or total operation performed.

Management

A custom hiring agreement should ensure that the custom operator will employ acceptable management practices in his operations.

Down-Time

A custom hiring agreement should stipulate terms of payment for custom operations. As well the custom operator should bill the client upon the completion of each custom operation. The bill should indicate actual units (hours, acres, etc.) completed, the rate charged per unit, the total charge and the date payment is due.

Termination

A minimum period for notice of termination should be included in a custom hiring agreement. A penalty should be stipulated for unjustified termination within the term of the agreement.

Insurance

A custom operator may be considered differently than a farmer when insuring. It is advised that this point be clarified with the insurance company if one considers doing custom work or renting equipment.

GUIDE TO PLANNING A CUSTOM FARMING AGREEMENT

Section A

_____, hereinafter referred to as the "custom operator", agrees to conduct the following types of farm operations on the described farm land of _____, hereinafter referred to as the "owner", located at _____, Saskatchewan, for the year 19___.

Description of Farm Operation	Legal Location	Acres	Fee Per Acre
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Note: Be specific about what each farm operation includes (i.e., harvesting — does it include swathing, combining with pickup and shipping the grain to the storage facility, or straight cutting the crop and shipping the grain?)

Section B

The custom operator agrees to the following schedule of operations:

Schedule of Operations	Commencement	Completion
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Section C

If during the term hereof, any of the goods and chattels of the custom operator are seized by any creditor, this agreement is forfeited and void.

The term owner and custom operator shall include the executors, administrators and assigns of the owner and custom operator, respectively.

_____ _____

Witness Farmer

_____ _____

Witness Custom Operator